

# Notice of Allowability

Application No.

10/722,290

Examiner

Robert T. Crow

Applicant(s)

HAHN ET AL.

Art Unit

1634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 29 January 2007.
2. ☒ The allowed claim(s) is/are 1-14 and 18-25.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 3/2007.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☒ Other Search notes.

Continuation of Substance of Interview including description of the general nature of what was discussed: The examiner contacted Mr. Schumann to get claims in condition for allowance. The changes to the claims as proposed in the Examiner Amendment were discussed. Mr. Schumann agreed to the changes, and it was further agreed the changes could be made in an Examiner Amendment.

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with James Schumann on 12 April 2007.
3. Applicant's original election was to a microarray hybridization device comprising a plurality of bubble fracturing elements. Applicant's original election was made in a telephone conversation with James Schumann on 25 April 2006 as outlined in the Office Action of 17 May 2006 and affirmed by Applicant on page 10 of the Remarks filed 10 August 2006. Since the elected invention of a microarray hybridization device having a plurality of bubble-fracturing elements in a planar region parallel to a substrate surface having a microarray thereon is free of the art of record, the nonelected invention of claims 18-22 (drawn to a method of using the allowable device of independent claim 1) and the device have been consequently rejoined.
4. The application has been amended as follows:
  - A. In the Title:

"having bubble-fracturing elements" has been inserted after "device."
  - B. In the claims:

In Claim 12: "between" has been inserted in line 3 after "uniformly."

In Claim 14: "at least" has been deleted from line 5 after "therefrom."

In Claim 18: "said" has been deleted from line 9 after "probe moieties, filling" and "the" has been inserted in line 9 after "probe moieties, filling."

Art Unit: 1634

In Claim 18 “thereby increasing the degree of mixing and hybridization” has been inserted at the end of the claim after “such bubbles.”

5. The following is an examiner’s statement of reasons for allowance:

The claims are free and clear of the prior art of record because the prior art of record does not teach barrier means with a plurality of bubble-fracturing elements in a planar region parallel to a substrate surface having a microarray thereon. The closest prior art of record is that of Schembri et al (U.S. Patent No. 6,186,659 B1, issued 13 February 2001). While Schembri et al teaches a microarray hybridization device comprising mechanical sources for forming bubbles on the inner surface of the substrate, Schembri does not teach barrier means with a plurality of bubble-fracturing elements in a planar region parallel to a substrate surface having a microarray thereon.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

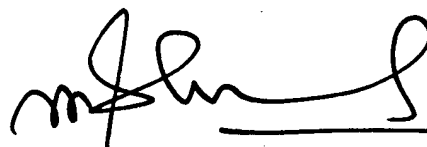
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert T. Crow whose telephone number is (571) 272-1113. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Ram Shukla can be reached on (571) 272-0735. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1634

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Robert T. Crow  
Examiner  
Art Unit 1634



**RAM R. SHUKLA, PH.D.**  
**SUPERVISORY PATENT EXAMINER**